

REMARKS

Claims 1, 7, and 16 have been amended. Claims 1 through 18 remain in the application. A marked up copy of the amended paragraph of the specification and amended claims is attached hereto as Appendix A.

The Examiner has objected to the specification because there is missing a U.S. patent application serial number for page 3 of the specification.

Accordingly, the specification has been amended on page 3, lines 12 through 18, to identify the U.S. patent application serial number. It is respectfully submitted that the specification, as amended, overcomes the objection.

Claims 1 through 18 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 14, and 32 of U.S. Patent No. 6,096,086. Applicants respectfully traverse this rejection.

U.S. Patent No. 6,096,086 to Weber et al. discloses a method and system for vehicle design using occupant-to-vehicle interaction. Claim 1, which is representative of claims 1, 14, and 32, claims a computer aided method for designing an interior portion of an automotive vehicle. The method includes the steps of selecting a set of generic parameters for describing an occupant position in the interior portion of the vehicle and occupant interaction with respect to at least one device within the vehicle. The method also includes the steps of selecting a value for each of the set of generic parameters and generating a spatial relationship between the occupant position and the at least one occupant device. The method further includes the steps of determining a parameter change for at least one of the set of generic parameters so that the spatial relationship meets a predetermined criteria.

In contradistinction, claim 1, as amended, clarifies the invention claimed as a method of parametric design of an instrument panel support structure for an instrument panel in a

vehicle. The method includes the steps of selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, and locating an instrument support structure relative to the vehicle body. The method also includes the steps of determining an input parameter, wherein the input parameter is a three dimensional coordinate defining the instrument panel support structure relative to the vehicle. The method includes the steps of electronically generating a parametric design of the instrument panel support structure using the input parameter and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique. The method further includes the steps of modifying the input parameter if the parametric design of the instrument panel support structure does not meet the predetermined criteria. Claims 7 and 16 have been amended similar to claim 1 and include other steps of the present invention.

The double-patenting doctrine precludes one person from obtaining more than one valid patent for the same invention or an obvious modification of an invention. Double patenting is concerned with attempts to claim the same or related subject matter twice. Thus, the standard for comparison for the second patent is what was claimed in the first patent, not what was disclosed in the specification of the first patent. “In general, a rejection on grounds of double patenting relies upon an analysis similar to the obviousness analysis relevant to a rejection pursuant to §§ 102(e) and 103; the key difference is that a double-patenting rejection looks solely to the claims of the prior art reference, and not to the entire disclosure of the prior art reference, as the basis for comparison. . . . A rejection for obviousness must be based on a comparison of the invention to the entirety of the disclosure in the prior art reference, whereas an obviousness-type double-patenting rejection must be grounded on a comparison of the invention to the claims, and only the claims, of the prior art reference.” Purdue Pharma L.P. v. Boehringer Ingelheim

GmbH, 98 F.Supp.2d 362, 392, 55 U.S.P.Q.2d 1168, 1190 (S.D. N.Y. 2000), aff'd, 237 F.3d 1359, 57 U.S.P.Q.2d 1647 (Fed. Cir. 2001).

Weber et al. '086 does not render obvious the claimed invention of claims 1 through 18 under the judicially created doctrine of obviousness-type double patenting. Claim 1 of the '086 patent is claiming a computer aided method for designing an interior portion of an automotive vehicle that includes the steps of selecting a set of generic parameters for describing an occupant position in the interior portion of the vehicle and occupant interaction with respect to at least one device within the vehicle, selecting a value for each of the set of generic parameters, generating a spatial relationship between the occupant position and the at least one occupant device, and determining a parameter change for at least one of the set of generic parameters so that the spatial relationship meets a predetermined criteria. Claim 1 of Weber et al. '086 does not claim a method of parametric design of an instrument panel support structure for an instrument panel in a vehicle that includes electronically generating a parametric design of the instrument panel support structure using the input parameter and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique as claimed by Applicants in claim 1 of the present application. In claim 1 of the present application, the method is used for parametric design of an instrument panel support structure by electronically generating the parametric design of the instrument panel support structure using an input parameter and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique and not an obvious design process of generating a spatial relationship between an occupant position and at least one occupant device and determining a parameter change for the set of generic parameters so that the spatial relationship meets a predetermined criteria as in the '086 patent. The claims of the pending application are for a distinct and separate unobvious

invention. Therefore, it is respectfully submitted that claims 1 through 18 are allowable over the rejection under the judicially created doctrine of obviousness-type double patenting.

Claims 1, 7, and 16 were rejected under 35 U.S.C. § 102(e) as being anticipated by Weber et al. (U.S. Patent No. 6,110,216). Applicants respectfully traverse this rejection.

U.S. Patent No. 6,110,216 to Weber et al. discloses an occupant based design method for an automotive vehicle. The method includes the steps of orienting an occupant representation with respect to a common reference point in a computer and representing at least one vehicle system with reference to the common reference point. The method also includes the steps of determining at least one occupant interaction between the occupant representation and the at least one vehicle system and reporting the at least one occupant interaction. Weber et al. does not disclose the steps of electronically generating a parametric design of an instrument panel support structure using an input parameter and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique.

In contradistinction, claim 1, as amended, clarifies the invention claimed as a method of parametric design of an instrument panel support structure for an instrument panel in a vehicle. The method includes the steps of selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, and locating an instrument support structure relative to the vehicle body. The method also includes the steps of determining an input parameter, wherein the input parameter is a three dimensional coordinate defining the instrument panel support structure relative to the vehicle. The method includes the steps of electronically generating a parametric design of the instrument panel support structure using the input parameter and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided

analytical technique. The method further includes the steps of modifying the input parameter if the parametric design of the instrument panel support structure does not meet the predetermined criteria. Claims 7 and 16 have been amended similar to claim 1 and include other steps of the present invention.

A rejection grounded on anticipation under 35 U.S.C. § 102 is proper only where the subject matter claimed is identically disclosed or described in a reference. In other words, anticipation requires the presence of a single prior art reference which discloses each and every element of the claimed invention arranged as in the claim. In re Arkley, 455 F.2d 586, 172 U.S.P.Q. 524 (C.C.P.A. 1972); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481 (Fed. Cir. 1984).

Weber et al. '216 does not disclose or anticipate the claimed invention of claims 1, 7, and 16. Specifically, Weber et al. '216 merely discloses an occupant based design method for an automotive vehicle including the steps of orienting an occupant representation with respect to a common reference point in a computer, representing at least one vehicle system with reference to the common reference point, determining at least one occupant interaction between the occupant representation and the at least one vehicle system, and reporting the at least one occupant interaction. Weber et al. '216 fails to disclose the combination of a method of parametric design of an instrument panel support structure including the steps of electronically generating a parametric design of the instrument panel support structure using an input parameter and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique as claimed by Applicants. Therefore, it is respectfully submitted that claims 1, 7, and 16 and the claims dependent therefrom are allowable over the rejection under 35 U.S.C. § 102(e).

Claims 1 through 18 were rejected under 35 U.S.C. § 103 as being unpatentable over Cavendish et al. (U.S. Patent No. 5,119,309) in view of Saxton et al. (U.S. Patent No. 4,882,692). Applicants respectfully traverse this rejection.

U.S. Patent No. 5,119,309 to Cavendish et al. discloses a feature based method of designing automotive panels. The method includes the steps of entering into a computer a plurality of coordinate data points and connecting the data points with straight lines and rounding the corner of the thereby defined polygon with a circle of radius to define a smooth closed curve. The method also includes the steps of generating output data which defines the composite surface and machining the workpiece in accordance with the output data. Cavendish et al. does not disclose selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, locating an instrument support structure relative to the vehicle body, electronically generating a parametric design of an instrument panel support structure using an input parameter, and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique.

U.S. Patent No. 4,882,692 to Saxton et al. discloses methods and systems for generating parametric designs. A method includes the steps of employing a data entry device to establish a master drawing with text and dimensions represented by variables and continuously displaying the updated master drawing on a monitor as the master drawing is established. The method also includes the steps of displaying on the monitor a design plan with an array of cells and employing the data entry device to input to the design plan each of one or more of the cells a statement which includes a solicitation for information. The method also includes the steps of employing the data entry device to input to the computer an instruction and employing the data entry device to input to the computer information solicited. The method includes the steps of

displaying the information inputted by the user on the monitor so that the user can check the responses inputted to the computer and electronically storing in the computer data representing the accomplished design. Saxton et al. does not disclose selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, and locating an instrument support structure relative to the vehicle body.

The United States Court of Appeals for the Federal Circuit (CAFC) has stated in determining the propriety of a rejection under 35 U.S.C. § 103, it is well settled that the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). The law followed by our court of review and the Board of Patent Appeals and Interferences is that “[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” In re Rinehart, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (C.C.P.A. 1976). See also In re Lalu, 747 F.2d 703, 705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984) (“In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.”)

None of the references cited, either alone or in combination with each other, teach or suggest the claimed invention of claims 1, 7, and 16. Specifically, Cavendish et al. ‘309 merely discloses a feature based method of designing automobile panels including the steps of entering into a computer a plurality of coordinate data points, connecting the data points with

straight lines and rounding the corner of the thereby defined polygon with a circle of radius to define a smooth closed curve, generating output data which defines the composite surface, and machining the workpiece in accordance with the output data. Cavendish et al. '309 lacks selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, locating an instrument support structure relative to the vehicle body, electronically generating a parametric design of an instrument panel support structure using an input parameter, and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique. Saxton et al. '692 merely discloses methods and systems for generating parametric designs including the steps of establishing a master drawing with text and dimensions, continuously displaying the updated master drawing on a monitor, displaying on the monitor a design plan with an array of cells, inputting to the design plan a statement which includes a solicitation for information, inputting to the computer an instruction and information solicited, displaying the information inputted on the monitor so that the user can check the responses inputted to the computer, and electronically storing in the computer data representing the accomplished design. Saxton et al. '692 lacks selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, and locating an instrument support structure relative to the vehicle body. There is no motivation in the art to combine Cavendish et al. '309 and Saxton et al. '692 together.

The references, if combinable, fail to teach or suggest the combination of a method of parametric design of an instrument panel support structure including the steps of selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system, orienting an occupant within the vehicle body, locating an instrument support structure relative to the vehicle body, electronically generating a parametric design of the instrument panel

support structure using an input parameter, and determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique as claimed by Applicants. Therefore, it is respectfully submitted that claims 1, 7, and 16 and the claims dependent therefrom are allowable over the rejection under 35 U.S.C. § 103.

Obviousness under § 103 is a legal conclusion based on factual evidence (In re Fine, 837 F.2d 1071, 1073, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988), and the subjective opinion of the Examiner as to what is or is not obvious, without evidence in support thereof, does not suffice. Since the Examiner has not provided a sufficient factual basis, which is supportive of his/her position (see In re Warner, 379 F.2d 1011, 1017, 154 U.S.P.Q. 173, 178 (C.C.P.A. 1967), cert. denied, 389 U.S. 1057 (1968)), the rejections of claims 1 through 20 are improper. Therefore, it is respectfully submitted that claims 1 through 20 are allowable over the rejections under 35 U.S.C. § 103.

Based on the above, it is respectfully submitted that the claims are in a condition for allowance, which allowance is solicited.

Respectfully submitted,

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APPENDIX A**VERSION OF THE SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW
THE CHANGES****IN THE SPECIFICATION:**

Please amend the specification on page 3, line 12 through 18, as follows:

It is also known to use a computer-aided design technique to design a vehicle system. An example of a computer aided design technique is disclosed in U.S. Patent Application, SN [_____] 08/984,806, entitled "Method and System For Vehicle Design Using Occupant Reach Zones", the disclosure of which is also hereby incorporated by reference.

IN THE CLAIMS:

Please amend claims 1, 7, and 16 as follows:

1. (AMENDED) A method of parametric design of an instrument panel support structure for an instrument panel in a vehicle comprising the steps of:

selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system;

orienting an occupant within the vehicle body;

locating an instrument support structure relative to the vehicle body;

determining an input parameter, wherein the input parameter is a three dimensional coordinate defining the instrument panel support structure relative to the vehicle;

electronically generating a parametric design of the instrument panel support structure using the input parameter;

determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique; and

modifying the input parameter if the parametric design of the instrument panel support structure does not meet the predetermined criteria.

7. (AMENDED) A method of parametric design of an instrument panel support structure for a vehicle comprising the steps of:

selecting a vehicle body structure for the vehicle from a library stored in a memory of a computer system;

orienting an occupant within the vehicle body;

locating a steering column relative to the vehicle body;

determining an input parameter, wherein the input parameter is a three dimensional coordinate defining the instrument panel support structure relative to the vehicle body;

electronically generating a parametric design of the instrument panel support structure using the orientation of the occupant, the location of the steering wheel, and the input parameter;

comparing the parametric design of the instrument panel support structure to a predetermined criteria using a computer-aided analytical technique;

varying an input parameter to meet the predetermined criteria; and

regenerating the parametric design of the instrument panel support structure.

16. (AMENDED) A method of parametric design of an instrument panel support structure for an instrument panel in a vehicle comprising the steps of:

selecting a vehicle body style for the vehicle from a vehicle library stored in a memory of a computer system;

orienting an occupant within the vehicle body;

orienting a steering column within the vehicle body;

selecting a parameter for locating an instrument panel support structure within the vehicle body;

selecting a parameter for attaching the instrument panel support structure within the vehicle body;

selecting a predetermined condition for the instrument panel support structure within the vehicle body;

electronically generating a parametric design of an instrument panel support structure using the locating parameter, the attaching parameter and the predetermined condition;

packaging an instrument panel component within the parametric design of the instrument panel support structure;

determining if the parametric design of the instrument panel support structure meets a predetermined criteria using a computer-aided analytical technique;

determining if the parametric design of the instrument panel support structure should be changed if the predetermined criteria is not met;

determining if a parameter should be changed if the parametric design of the instrument panel support structure should be changed; and

modifying the parameter if the parameter should be changed.